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10/678,889	10/03/2003	Charles Lee Edwards	TH1647 02 (US)	2368
7590		12/21/2007	EXAMINER	
Jeffrey Y. Kao			OGDEN JR, NECHOLUS	
Shell Oil Company			ART UNIT	
Legal-Intellectual Property			PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/678,889  
Filing Date: October 03, 2003  
Appellant(s): EDWARDS ET AL.

**MAILED**  
**DEC 21 2007**  
**GROUP 1700**

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Donald F. Haas  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed September 25, 2007 appealing from the Office action mailed April 12, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

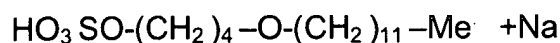
### **(8) Evidence Relied Upon**

Tsujii et al, "Physiochemical properties of anionic surfactants with polyoxyalkylene group in water", Tochigi Res. Lab., Kao Soap Co., Tochigi, Japan. Yukagaku, 30 (9), pp.566-72 1981.

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 57-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujii, Kaoru; Okahashi, Kenji; Takeuchi, Takashi., "Physicochemical properties of anionic surfactants with poly(oxyalkylene) group in water," Tochigi Res. Lab., Kao Soap Co., Tochigi., Yukagaku, 30 (9) Japan (1981), pp. 566-72.
2. Tsujii et al teach physiochemical properties of detergent or surfactants of sodium salts of sulfate esters of alkoxyated C12-C18 fatty acid alcohols containing 1-8 oxyalkylene groups/mol. Furthermore, the surfactants containing polyoxyethylene groups have higher critical micelle concentrations compared with surfactants containing polyoxypropylene and polyoxybutylene groups (see abstract). The sulfate ester compound has the formula:



The anionic surfactant of Tsujii et al differ only by additional  $\text{CH}_2$  groups, wherein it would have been obvious to include additional homologs because absent a showing to the contrary, one of ordinary skill in the art would expect similar properties because of close structural similarity. Moreover, with respect to the branching of the alkyl group, the examiner contends that Tsujii et al is silent with respect to branching, however the

formula does describe a linear alkyl ethoxy sulfate compound wherein it would have been obvious, in the absence of unexpected results, for the alkoxylated sulfate surfactant of Tsujii et al to comprise a branched alkyl chains since branching occurs naturally depending on the feedstock of alcohols. Accordingly, it is held that "A prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities and "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (MPEP § 2144). Compounds, which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH<sub>2</sub>- groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). See also In re May, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978).

#### **(10) Response to Argument**

Appellant argues that the prior art compound is a linear compound and the alkyl ether sulfates of the claimed invention is branched chain compound.

The examiner contends that the ethoxylated sulfate of Tsujii et al is silent with respect to the position of the successive alkyl chain, although the compound appears

linear. However, linear or branched chain compounds are similar and considered obvious to the skilled artisan, in the absence of unexpected results, since branching or linearity occur naturally depending on the feedstock of the alcohol employed. Therefore, in the absence of unexpected results, the compounds are similar and would have similar properties absent a showing to the contrary.

Appellant argues that the showing on page 31 exhibits the superiority of the branched primary alcohol sulfates having a higher hardness tolerance as compared to linear alkyl benzene sulfonates, linear alkyl sulfates and branched alkyl sulfates. Moreover, appellant argues that Examples A-C on page 51 and 52 of his specification compares properties of sulfated C12-C16 branched primary alcohols with linear NEODOL 23 alcohols and C12 linear alkyl sulfates.

The examiner contends that the showing is not commensurate in scope with the claimed invention, because appellant has not compared the closest structure of the prior art against the claimed compound of the invention. For example, Appellant's data refers to branched alkyl sulfates and compares linear alkyl sulfates, however, the claimed compound and the prior art compound are drawn to ethoxylated alkyl sulfates. The examiner asserts that one of ordinary skill in the art would not be able to determine criticality because applicant has not compared the claimed invention against the prior art invention even-though appellant argues the showings are analogous to the alkyl sulfate in terms of hardness tolerance. Accordingly, it has been held that an affidavit or declaration under 37 CFR 1.132 must compare the claimed subject matter with the

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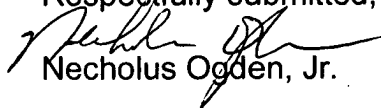
closest prior art to be effective to rebut a prima facie case of obviousness. In re Burckel, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979).

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Necholas Ogden, Jr.

Conferees:

  
Harold Pyon

  
Greg Mills